

WHAT IS CLAIMED IS:

1. A sheathing adapted to be fastened to at least one wall supporting structure, comprising at least two layers:
 - (a) a first layer comprising a polymeric foam layer; and
 - 5 (b) a second layer comprising a polymeric scrim, the polymeric scrim including a first portion and a second portion, the second portion being located near the periphery of the polymeric scrim layer, the first portion having a first machine direction (MD) scrim count number and a first transverse direction (TD) scrim count number, the second portion having a second MD scrim count number and a second TD scrim count number, at least one of the
10 second MD scrim count number and the second TD scrim count number being greater than the respective first MD scrim count number or the first TD scrim count number.
2. The sheathing of Claim 1, wherein the second layer includes a third portion, the third portion being located near the periphery of the polymeric scrim layer opposite the second portion, the third portion having a third MD scrim count number and a third TD
15 scrim count number, at least one of the third MD scrim count number and the third TD scrim count number being greater than the respective first MD scrim count number or the first TD scrim count number.
3. The sheathing of Claim 2, wherein the second and third MD scrim count numbers are the same.
- 20 4. The sheathing of Claim 2, wherein the second and third TD scrim count numbers are the same.

5. The sheathing of Claim 2, wherein the second and third MD scrim count numbers are the same and the second and third TD scrim count numbers are the same.

6. The sheathing of Claim 1, wherein the second MD scrim count number is at least about two times the first MD scrim count number.

5 7. The sheathing of Claim 2, wherein the second and third MD scrim count numbers are at least about two times the first MD scrim count number.

8. The sheathing of Claim 1, wherein the second MD scrim count number is at least about four times the first MD scrim count number.

9. The sheathing of Claim 2, wherein the second and third MD scrim count
10 numbers are at least about four times the first MD scrim count number.

10. The sheathing of Claim 1, wherein the second MD scrim count number is at least about six times the first MD scrim count number.

11. The sheathing of Claim 2, wherein the second and third MD scrim count numbers are at least about six times the first MD scrim count number.

15 12. The sheathing of Claim 1 further including a third layer comprising an adhesive, the third layer being located between the first and the second layers.

13. The sheathing of Claim 12 further including a fourth layer being located adjacent to the second layer, the fourth layer comprising an impact polystyrene.

14. The sheathing of Claim 13, wherein the impact polystyrene is a high impact
20 polystyrene.

15. The sheathing of Claim 13 further including a fifth layer being located adjacent to the third layer, the fifth layer comprising an impact polystyrene.

16. The sheathing of Claim 1, wherein the first layer is a polyolefin foam.
17. The sheathing of Claim 1, wherein the first layer is a polyethylene terephthalate foam.
18. The sheathing of Claim 1, wherein the first layer is a polystyrenic foam.
- 5 19. The sheathing of Claim 1, wherein the polymeric scrim is made from polyolefins, polyesters or nylon.
20. The sheathing of Claim 1, wherein the polymeric scrim is made from polyolefins, the polyolefinic scrim being made of polypropylene, polyethylene or the combination thereof.
- 10 21. The sheathing of Claim 1, wherein the polymeric scrim is made from polypropylene.
22. The sheathing of Claim 1, wherein the polymeric scrim is polypropylene and the first layer is a polystyrenic foam.
23. The sheathing of Claim 1, wherein the polymeric scrim is woven.
- 15 24. The sheathing of Claim 23, wherein the polymeric scrim is cross-woven.
25. The sheathing of Claim 1, wherein the polymeric scrim is non-woven.
26. The sheathing of Claim 1, wherein the thickness of the sheathing is from about 0.25 inch to about 3 inches.
27. The sheathing of Claim 2, wherein the second and third portions extend from
20 the periphery of the polymeric scrim layer inwardly about 2 to about 3 inches.
28. The sheathing of Claim 1, wherein the second and third portions are located generally parallel to the at least one wall supporting structure.

29. A method of using a sheathing in a building, the method comprising:

(a) providing a sheathing comprising at least two layers, the first layer comprises a polymeric foam layer, a second layer comprising a polymeric scrim, the polymeric scrim including a first portion and a second portion, the second portion being located near the periphery of the polymeric scrim layer, the first portion having a first machine direction (MD) scrim count number and a first transverse direction (TD) scrim count number, the second portion having a second MD scrim count number and a second TD scrim count number, at least one of the second MD scrim count number and the second TD scrim count number being greater than the respective first MD scrim count number or the first TD scrim count number;

(b) providing at least one wall supporting structure; and

(c) installing the sheathing to at least one of the wall supporting structures.

30. The method of Claim 29, wherein the second layer includes a third portion, the third portion being located near the periphery of polymeric scrim layer opposite the second portion, the third portion having a third MD scrim count number and a third TD scrim count number, at least one of the third MD scrim count number and the third TD scrim count number being greater than the respective first MD scrim count number or the first TD scrim count number.

31. The method of Claim 30, wherein the step of installing the sheathing to at least one of the wall supporting structures includes positioning the second and third portions in a location that is generally parallel to the at least one wall supporting structure.

32. The method of Claim 29, wherein the second scrim count is located on at least two opposing portions of the periphery of the polymeric scrim layer.

33. The method of Claim 30, wherein the second and third MD scrim count numbers are the same.

5 34. The method of Claim 29, wherein the step of installing includes the use of a fastener.

35. The method of Claim 34, wherein the fastener is a staple or a nail.

36. The method of Claim 29, wherein the building is prefabricated housing or a site built housing.

10 37. The method of Claim 34, wherein the fastener remains connected to the wall supporting structure.

38. A sheathing adapted to be fastened to at least one wall supporting structure, comprising at least three layers:

(a) a first layer comprising a polymeric foam layer;

15 (b) a second layer comprising a polymeric cross-woven scrim, the polymeric scrim including a first portion and a second portion, the second portion being located near the periphery of the polymeric scrim layer, the first portion having a first machine direction (MD) scrim count number and a first transverse direction (TD) scrim count number, the second portion having a second MD scrim count number and a second TD scrim count
20 number, at least one of the second MD scrim count number and the second TD scrim count number being greater than the respective first MD scrim count number or the first TD scrim count number; and

(d) a third layer comprising an impact polystyrene, the third layer being located between the first and the second layers.

39. The sheathing of Claim 38, wherein the second layer includes a third portion, the third portion being located near the periphery of the polymeric scrim layer opposite the second portion, the third portion having a third MD scrim count number and a third TD
5 scrim count number, at least one of the third MD scrim count number and the third TD scrim count number being greater than the respective first MD scrim count number or the first TD scrim count number.

40. The sheathing of Claim 38 further including a fourth layer comprising an
10 impact polystyrene, the fourth layer being located adjacent to the first layer on an opposing side from the third layer.

41. The sheathing of Claim 40 further including a fifth layer comprising an adhesive, the fifth layer being located between the second and third layers.

42. The sheathing of Claim 38 further including a fourth layer made of an
15 adhesive, the fourth layer being located between the second and third layers.

43. The sheathing of Claim 38, wherein the polymeric foam is a polyolefin foam.

44. The sheathing of Claim 38, wherein the polymeric foam is a polystyrenic
foam.

45. The sheathing of Claim 38, wherein the polymeric foam is polyethylene
20 terephthalate foam.

46. The sheathing of Claim 38, wherein the cross-woven scrim is a cross-woven polypropylene scrim.

47. The sheathing of Claim 38, wherein the polymeric foam is polystyrenic foam, the polymeric scrim is a woven polypropylene scrim and wherein the sheathing further includes a fourth layer and a fifth layer, the fourth layer comprising an impact polystyrene and is located adjacent to the second layer on an opposing side from the third layer and the
5 fifth layer comprises an adhesive and is located between the second and third layers.

48. The sheathing of Claim 40 further including a sixth layer comprising a polypropylene layer and a seventh layer comprising an adhesive, the sixth layer being located adjacent to the first layer on an opposing side from the third layer, the seventh layer being located adjacent to the sixth layer on an opposing side from the first layer.

10 49. The sheathing of Claim 39, wherein the second and third MD scrim count numbers are the same.

50. The sheathing of Claim 39, wherein the second and third TD scrim count numbers are the same.

51. The sheathing of Claim 39, wherein the second and third MD scrim count
15 numbers are the same and the second and third TD scrim count numbers are the same.

52. The sheathing of Claim 38, wherein the second MD scrim count number is at least about two times the first MD scrim count number.

53. The sheathing of Claim 39, wherein the second and third MD scrim count numbers are at least about two times the first MD scrim count number.

20 54. The sheathing of Claim 38, wherein the second MD scrim count number is at least about four times the first MD scrim count number.

55. The sheathing of Claim 39, wherein the second and third MD scrim count numbers are at least about four times the first MD scrim count number.

56. The sheathing of Claim 38, wherein the second MD scrim count number is at least about six times the first MD scrim count number.

5 57. The sheathing of Claim 39, wherein the second and third MD scrim count numbers are at least about six times the first MD scrim count number.

58. The sheathing of Claim 38, wherein the thickness of the sheathing is from about 0.25 inch to about 3 inches.

59. The sheathing of Claim 39, wherein the second and third portions extend
10 from the periphery of the polymeric scrim layer inwardly about 2 to about 3 inches.

60. The sheathing of Claim 38, wherein the second and third portions are located generally parallel to the at least one wall supporting structure.

61. A sheathing adapted to be fastened to at least one wall supporting structure comprising at least two layers:

15 (a) a first layer comprising a polymeric foam layer; and

(c) a second layer comprising a polymeric scrim having a uniform scrim count number, wherein the polymeric scrim has a machine direction (MD) scrim count number and a transverse direction (TD) scrim count number, wherein the MD scrim count number is at least 18 and the TD scrim count number is at least 4.

20 62. The sheathing of Claim 61, wherein the MD scrim count number is at least 21.

63. The sheathing of Claim 61, wherein the TD scrim count number is at least 6.